

PROJECT DESCRIPTION

I. GENERAL

This project involves the reconstruction of the existing traffic control signal at the intersection of MD 144 and Pennsylvania Avenue in Washington County, Maryland. MD 144 is considered to run in an east/west direction.

II. INTERSECTION OPERATION

The intersection currently operates in NEMA four(4) phase, semi-traffic-actuated mode. The MD 144 through movements operate concurrently. The Pennsylvania Avenue through movements operate concurrently. The existing phasing is to be utilized.

An eight phase, full-traffic-actuated, solid state digital controller with intersection monitor and harness, battery back-up, and one 4-channel rack mounted time delay output loop detector amplifier housed in a pole mounted cabinet are to be installed at this location.

EQUIPMENT LIST

Equipment to be furnished and installed by the Contractor.
All equipment in this list shall have catalog cuts submitted for approval prior to installation.

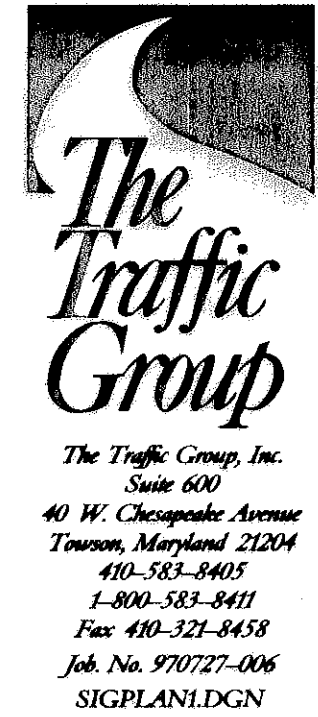
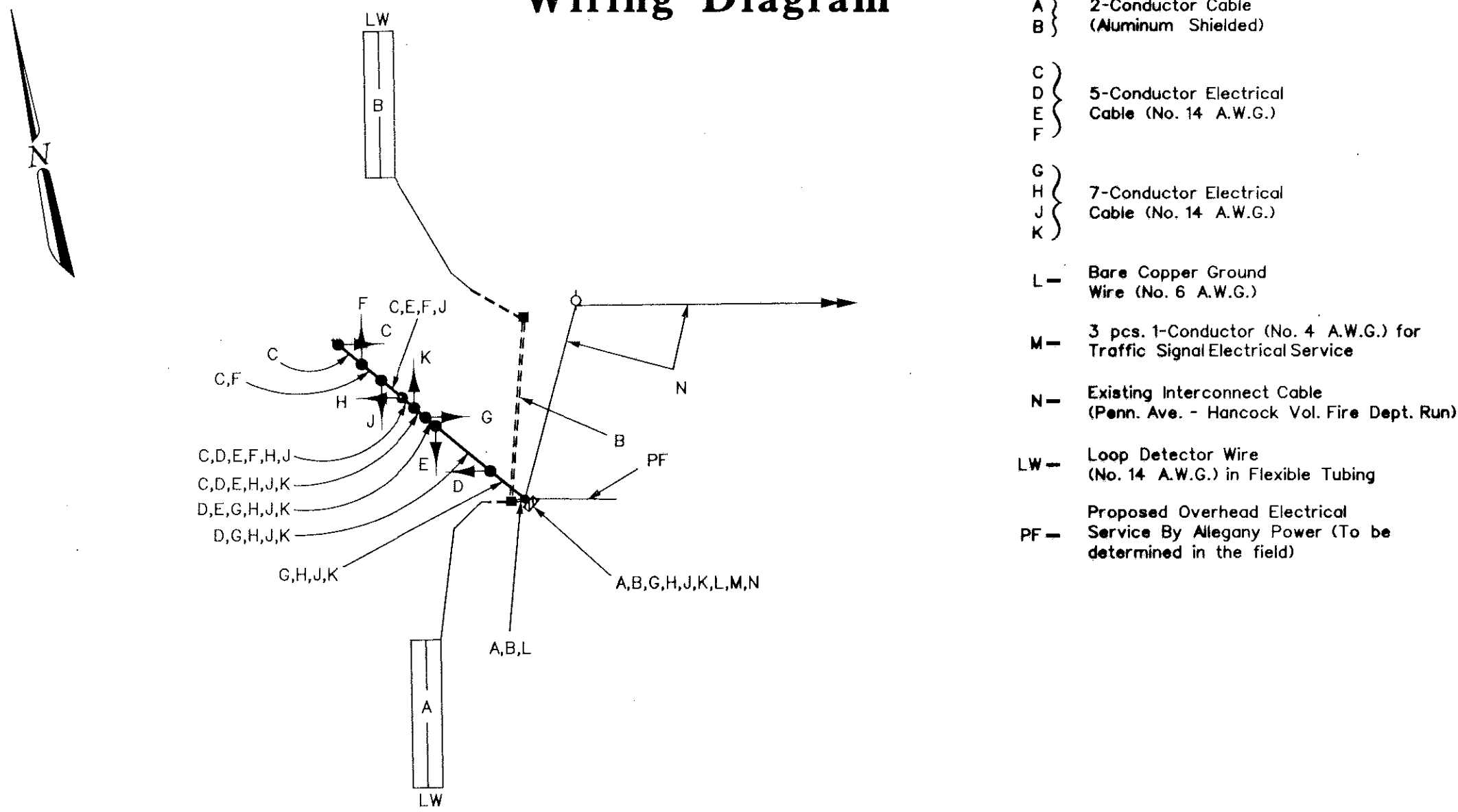
Item No.	Category Code No.	Quantity	Units	Specification Section	Description
	500000	55	LF	556	24 in. wide HAPPTPM - white for stop line.
	818041	1	EA	818	27 ft. steel mast arm pole with a 60 ft. mast arm [Note: four 2 in. x 90 in. anchor bolts].
	800000	1	EA	816	Standard S.H.A. traffic signal controller, pole mounted cabinet, and one 4-channel rack mounted loop detector amplifier [Note: Controller and cabinet shall be supplied by Econolite and delivered to the S.H.A. signal shop for wiring and testing. Contact Mr. Ed Rodenhizer (410) 787-7650].
	860022	4	EA	814	12 in., one-way, three section (R,Y,G) adjustable traffic signal head with mast arm mounting hardware and tunnel visors.
	860021	4	EA	814	8 in., one-way, three section (R,Y,G) adjustable traffic signal head with mast arm mounting hardware and tunnel visors.
	800000	18.75	SF	813	30 in. x 30 in. R10-11b sign - mast arm mount.
	800000	42.67	SF	813	32 in. x Var. D3-2 sign - pole mount.
	811001	2	EA	811	Handhole.
	862102	275	LF	815	Sawcut for signal loop detector.
	862101	995	LF	810	Loop detector wire (No. 14 A.W.G.) encased in flexible tubing.
	861104	75	LF	810	2-conductor (aluminum shielded) electrical cable (No. 14 A.W.G.).
	861107	100	LF	810	5-conductor electrical cable (No. 14 A.W.G.).
	861108	230	LF	810	7-conductor electrical cable (No. 14 A.W.G.).
	810010	45	LF	810	1-conductor electrical cable (No. 4 A.W.G.).
	802501	15	LF	804	Bare copper stranded ground wire (No. 6 A.W.G.).
	869101	160	LF	819	1/4 in. steel tether wire.
	800000	20	LF	805	1 in. liquid tight flexible non-metallic conduit for loop detector sleeve.
	800000	5	LF	805	3 in. polyvinyl chloride [Schedule 80] electrical conduit - trenched.
	800000	40	LF	805	3 in. polyvinyl chloride [Schedule 80] electrical conduit - slotted in roadway.
	801004	4.65	CY	801	Concrete foundation for traffic signal equipment.
	837001	2	EA	804	Ground rod - 3/4 in. diameter x 10 ft. length.
	838003	1	EA	807	Control and distribution equipment (120/240 V, one phase, three wire system) for a type P-7 overhead electrical service.
	800000	1	EA	---	Cut, clean, cap, and galvanized steel mast arm pole.
	800000	Lump Sum	LS	---	Relocate existing interconnect cable.
	800000	Lump Sum	LS	---	Remove existing traffic signal equipment.


FHWA REGION NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
3	MD			

Phase Chart

	1	2	3	4	5	6	7	8	
	R	R	R	R	R	R	R	R	
	Y	Y	Y	Y	Y	Y	Y	Y	
	G	G	G	G	G	G	G	G	
Phase 2 & 6	G	G	G	G	R	R	R	R	←
2 & 6 Change	Y	Y	Y	Y	R	R	R	R	→
Phase 4 & 8	R	R	R	R	G	G	G	G	↓
4 & 8 Change	R	R	R	R	Y	Y	Y	Y	↑
Flashing Operation	FL/Y	FL/Y	FL/Y	FL/Y	FL/R	FL/R	FL/R	FL/R	⚡

Wiring Diagram



 MDOT - STATE HIGHWAY ADMINISTRATION Office of Traffic & Safety TRAFFIC ENGINEERING DESIGN DIVISION			
DRAWN BY: J. Dirndorfer		(General Information)	
DES. BY: J. Dirndorfer		MD 144 at Pennsylvania Ave.	
CHK. BY: JED		COUNTY: WASHINGTON LOG MILE • 21B14403.91	
DATE: December 31, 1997		TS/STD. NO.	
SCALE: N/A		SHEET NO.	
F.A.P. NO.		3763-GI	
S.H.A. NO.		of	